



Molecular basis of cholera blood-group dependence and implications for a world characterized by climate change

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Abstract:

Climate change has the potential to increase the threat of water-borne diseases, through rises in temperature and sea-level, and precipitation variability. Cholera poses a particular threat, and the need to develop better intervention tools is imminent. Cholera infections are particularly severe for blood group O individuals, who are less protected by the current vaccines. Here we derive a hypothesis as to the molecular origins of blood-group dependence of this disease, based on relevant epidemiological, clinical and molecular data, and give suggestions on how to plan prevention strategies, and develop novel and improved pharmaceuticals.

Source: <http://dx.doi.org/10.1016/j.febslet.2010.03.050>

Resource Description

Communication: ☒

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☒

audience to whom the resource is directed

Health Professional, Researcher

Exposure : ☒

weather or climate related pathway by which climate change affects health

Precipitation, Sea Level Rise, Temperature

Geographic Feature: ☒

resource focuses on specific type of geography

Freshwater

Geographic Location: ☒

resource focuses on specific location

Climate Change and Human Health Literature Portal

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: Cholera

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Medical Community Engagement:

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Other Vulnerable Population: Blood group O individuals

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content